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WALL & TONG, LLP IBM CORPORATION 595 SHREWSBURY AVE SUITE 100 SHREWSBURY, NJ 07702			EXAMINER CHEN, QING	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/712,828	<b>Applicant(s)</b> BIGUS, JOSEPH P.
	<b>Examiner</b> Qing Chen	<b>Art Unit</b> 2191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(o).

#### Status

- 1) Responsive to communication(s) filed on 28 December 2009.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,2,5-9,11-13 and 32-36 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,2,5-9,11-13 and 32-36 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/06)  
     Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This Office action is in response to the amendment filed on December 28, 2009.
2. **Claims 1, 2, 5-9, 11-13, and 32-36** are pending.
3. **Claims 1 and 32** have been amended.
4. **Claims 3, 4, 10, and 14-31** have been canceled.
5. **Claims 33-36** have been added.

#### *Response to Amendment*

#### *Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 2, 5-9, 11-13, 32, and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over **US 5,754,858** (hereinafter “**Broman**”) in view of **US 6,868,413** (hereinafter “**Grindrod**”) and **US 6,694,053** (hereinafter “**Burns**”).

As per **Claim 1**, Broman discloses:

- designating a customizable element of a set as a customizable template by inserting a template modifier before the customizable element in source code for the application, the customizable element being selected by a first end-user (*see Column 5: 7-9, “As used herein, the*

*term, "writer," refers to a person who creates a custom application project generator with the system 50."; Column 8: 49-54, "The text templates generally contain lines of source code, such as C++ code or resource-script directives (e.g., compiler directives), for the application project 54. The text templates also generally contain macros and directives that the services module 76 uses to determine the content of the source files in the application project 54."; Column 9: 42-45, "In the illustrated text templates 70, the beginning and end of macros are marked with a pair of dollar sign characters (\$\$) for parsing by the service module 76 when generating the application project 54 ...");*

- compiling said customizable element into at least one object (*see Column 6: 25-27, "The dialog resources 68 and the templates 70 are compiled by a resource compiler into one or more ".RES" files."*);
  - parsing said set to detect said customizable element designated as a customizable template (*see Column 8: 42-44, "The text templates are parsed by the services module 76 to create the source code files for the application project 54."*); and
    - customizing said customizable element under instruction from a second end user different from the first end user (*see Column 5: 9-12, "The term, "user," refers to a person who operates the custom application project generator to create application projects. The writer and user can be two different people or the same person."; Column 6: 36-47, "In the second phase, the user operates the custom application project generator 52 to create the application project 54 according to the user's choice from the application project options defined by the writer. The custom application project generator 52 utilizes services provided by the services module 76 to present the dialogs defined by the writer in the resources 68 to the user at the generator user*

*interface 78. The custom application project generator 52 then utilizes application project generation services of the generator service module 76 to generate the application project 54 by parsing the templates 70 according to the application project options chosen by the user. ").*

However, Broman does not disclose:

- a rule-based application;
- a ruleset; and
- enabling editing of said rule-based application during runtime processing of said ruleset in an environment in which said rule-based application executes.

Grindrod discloses:

- a rule-based application (*see Column 6: 37-41, "In the customizable business logic application, a business rule generally refers to a logical statement defined around events occurring in the database within the customizable business logic application system.";* and
- a ruleset (*see Column 6: 51-56, "Business rules are generally designed to fit the needs of the company in which the customizable business logic application is utilized. A business rule is an expression of one or more conditions and one or more actions such that when the one or more conditions are met, the one or more actions are triggered.").*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to implement the application as a rule-based application and include a ruleset. The modification would be obvious because one of ordinary skill in the art would be motivated to customize the application according to a business's specific requirements and needs using business logic rules (*see Grindrod – Column 1: 40-50*).

Burns discloses:

- enabling editing of a rule-based application during runtime processing of a ruleset in an environment in which said rule-based application executes (*see Column 2: 37-43, "In order to recognize structures that are unique to the document, the document structure analysis routine utilizes a rule base that is adapted to the particular application domain to analyze structures in the document. The rule base comprises a plurality of rules for testing structures in the document in order to recognize unique, or application-domain-dependent, structures."; Column 6: 31-37, "Furthermore, the rule base preferably is exchangeable and editable during runtime of the system 1 to ensure that the rule base is adaptable to the document domain, e.g., business letters, technical journals, etc. For each domain, an appropriate rule base preferably is created and tuned to the domain, either offline or during runtime.").* [Examiner's Remarks: Note that the document structure analysis routine (rule-based application) utilizes a rule base which is editable during runtime of the document structure analysis routine.]

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Burns into the teaching of Broman to modify Broman's invention to include enabling editing of said rule-based application during runtime processing of said ruleset in an environment in which said rule-based application executes. The modification would be obvious because one of ordinary skill in the art would be motivated to allow a user to perform customization of business rules without having to shut down the business process application which executes the business rules.

As per **Claim 2**, the rejection of **Claim 1** is incorporated; however, Broman and Burns do not disclose:

- wherein said set comprises a ruleset.

Grindrod discloses:

- wherein a set comprises a ruleset (*see Figure 2; Column 7: 8-16, "The business rules management console 200 facilitates management of the business rules application and allows the administrator or end user to create and/or modify business rules in order to customize business processes."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to include wherein said set comprises a ruleset. The modification would be obvious because one of ordinary skill in the art would be motivated to customize the application according to a business's specific requirements and needs using business logic rules (*see Grindrod – Column 1: 40-50*).

As per **Claim 5**, the rejection of **Claim 1** is incorporated; and Broman further discloses:

- wherein said customizable element comprises a variable (*see Column 9: 42-45, "In the illustrated text templates 70, the beginning and end of macros are marked with a pair of dollar sign characters (\$\$) for parsing by the service module 76 when generating the application project 54 ..."*).

As per **Claim 6**, the rejection of **Claim 1** is incorporated; however, Broman and Burns do not disclose:

- wherein said customizable element comprises a rule.

Grindrod discloses:

- wherein a customizable element comprises a rule (*see Column 11: 49-55, "... symbols may represent various types of data such as ... business rules templates ... "*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to include wherein said customizable element comprises a rule. The modification would be obvious because one of ordinary skill in the art would be motivated to customize the application according to a business's specific requirements and needs using business logic rules (*see Grindrod – Column 1: 40-50*).

As per **Claim 7**, the rejection of **Claim 1** is incorporated; however, Broman and Burns do not disclose:

- wherein said customizable element comprises a ruleset.

Grindrod discloses:

- wherein a customizable element comprises a ruleset (*see Column 11: 49-55, "... symbols may represent various types of data such as ... business rules templates ... "*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to include wherein said customizable element comprises a ruleset. The

modification would be obvious because one of ordinary skill in the art would be motivated to customize the application according to a business's specific requirements and needs using business logic rules (*see Grindrod – Column 1: 40-50*).

As per **Claim 8**, the rejection of **Claim 1** is incorporated; however, Broman and Burns do not disclose:

- designating a ruleset of said set as a customizable ruleset template.

Grindrod discloses:

- designating a ruleset of a set as a customizable ruleset template (*see Column 12: 41-44, "Preferably, business rules templates are provided. Business rules templates are predefined and reusable text items that can be defined, stored, and reused by various business rules. "*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to include designating a ruleset of said set as a customizable ruleset template. The modification would be obvious because one of ordinary skill in the art would be motivated to customize the application according to a business's specific requirements and needs using business logic rules (*see Grindrod – Column 1: 40-50*).

As per **Claim 9**, the rejection of **Claim 8** is incorporated; however, Broman and Burns do not disclose:

- generating a customized ruleset from the customizable ruleset template.

Grindrod discloses:

- generating a customized ruleset from a customizable ruleset template (*see Column 12: 41-44, "Preferably, business rules templates are provided. Business rules templates are predefined and reusable text items that can be defined, stored, and reused by various business rules." and 48-49, "Templates allow the same string of text to be re-used by multiple business rules."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to include generating a customized ruleset from the customizable ruleset template. The modification would be obvious because one of ordinary skill in the art would be motivated to customize the application according to a business's specific requirements and needs using business logic rules (*see Grindrod – Column 1: 40-50*).

As per **Claim 11**, the rejection of **Claim 1** is incorporated; and Broman further discloses:

- enabling customization in a development environment (*see Column 6: 51-54, "The user completes development of the application 56 by modifying the application project 54 using an editor 86, and building the application project 54 into the application 56 using a compiler and linker 88."*).

As per **Claim 12**, the rejection of **Claim 1** is incorporated; however, Broman and Burns do not disclose:

- re-editing a previously generated rule.

Grindrod discloses:

- re-editing a previously generated rule (*see Column 7: 30-32, "From the business rules management console 200, the administrator may elect to create, modify, or delete a business logic rule."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to include re-editing a previously generated rule. The modification would be obvious because one of ordinary skill in the art would be motivated to customize the application according to a business's specific requirements and needs using business logic rules (*see Grindrod – Column 1: 40-50*).

As per **Claim 13**, the rejection of **Claim 1** is incorporated; however, Broman and Burns do not disclose:

- wherein a new ruleset is generated from a customizable ruleset template, and a pre-existing customizable rule template is associated with said new ruleset and is unchanged.

Grindrod discloses:

- wherein a new ruleset is generated from a customizable ruleset template, and a pre-existing customizable rule template is associated with said new ruleset and is unchanged (*see Column 12: 41-44, "Preferably, business rules templates are provided. Business rules templates are predefined and reusable text items that can be defined, stored, and reused by various business rules." and 48-49, "Templates allow the same string of text to be re-used by multiple business rules."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to include wherein a new ruleset is generated from a customizable ruleset template, and a pre-existing customizable rule template is associated with said new ruleset and is unchanged. The modification would be obvious because one of ordinary skill in the art would be motivated to customize the application according to a business's specific requirements and needs using business logic rules (*see Grindrod – Column 1: 40-50*).

As per **Claim 32**, Broman discloses:

- designating a customizable element of a set as a customizable template by inserting a template modifier before the customizable element in source code for the application, the customizable element being selected by a first end-user, where the customizable element is one of: a variable, a rule, or a ruleset (*see Column 5: 7-9, "As used herein, the term, "writer," refers to a person who creates a custom application project generator with the system 50."*; *Column 8: 49-54, "The text templates generally contain lines of source code, such as C++ code or resource-script directives (e.g., compiler directives), for the application project 54. The text templates also generally contain macros and directives that the services module 76 uses to determine the content of the source files in the application project 54."*; *Column 9: 42-45, "In the illustrated text templates 70, the beginning and end of macros are marked with a pair of dollar sign characters (\$\$) for parsing by the service module 76 when generating the application project 54 ... "*);

- compiling said customizable element into at least one object to form a ruleset (*see Column 6: 25-27, "The dialog resources 68 and the templates 70 are compiled by a resource compiler into one or more ".RES" files."*);
- parsing said set to detect said customizable element designated as a customizable template (*see Column 8: 42-44, "The text templates are parsed by the services module 76 to create the source code files for the application project 54."*); and
- customizing said customizable element under instruction from a second end user different from the first end user (*see Column 5: 9-12, "The term, "user," refers to a person who operates the custom application project generator to create application projects. The writer and user can be two different people or the same person."; Column 6: 36-47, "In the second phase, the user operates the custom application project generator 52 to create the application project 54 according to the user's choice from the application project options defined by the writer. The custom application project generator 52 utilizes services provided by the services module 76 to present the dialogs defined by the writer in the resources 68 to the user at the generator user interface 78. The custom application project generator 52 then utilizes application project generation services of the generator service module 76 to generate the application project 54 by parsing the templates 70 according to the application project options chosen by the user."*).

However, Broman does not disclose:

- a rule-based application;
- a ruleset; and
- editing said customizable element during runtime processing of said ruleset in an environment in which the rule-based application executes, where said editing comprises

generating a new ruleset from a customizable ruleset template, and where a pre-existing customizable rule template is associated with said new ruleset and is unchanged.

Grindrod discloses:

- a rule-based application (*see Column 6: 37-41, "In the customizable business logic application, a business rule generally refers to a logical statement defined around events occurring in the database within the customizable business logic application system."*);
- a ruleset (*see Column 6: 51-56, "Business rules are generally designed to fit the needs of the company in which the customizable business logic application is utilized. A business rule is an expression of one or more conditions and one or more actions such that when the one or more conditions are met, the one or more actions are triggered."*); and
- generating a new ruleset from a customizable ruleset template, and where a pre-existing customizable rule template is associated with said new ruleset and is unchanged (*see Column 12: 41-44, "Preferably, business rules templates are provided. Business rules templates are predefined and reusable text items that can be defined, stored, and reused by various business rules." and 48-49, "Templates allow the same string of text to be re-used by multiple business rules."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to implement the application as a rule-based application and include a ruleset and generating a new ruleset from a customizable ruleset template, and where a pre-existing customizable rule template is associated with said new ruleset and is unchanged. The modification would be obvious because one of ordinary skill in the art would be motivated to

customize the application according to a business's specific requirements and needs using business logic rules (*see Grindrod – Column 1: 40-50*).

Burns discloses:

- editing a customizable element during runtime processing of a ruleset in an environment in which a rule-based application executes (*see Column 2: 37-43, "In order to recognize structures that are unique to the document, the document structure analysis routine utilizes a rule base that is adapted to the particular application domain to analyze structures in the document. The rule base comprises a plurality of rules for testing structures in the document in order to recognize unique, or application-domain-dependent, structures."; Column 6: 31-37, "Furthermore, the rule base preferably is exchangeable and editable during runtime of the system 1 to ensure that the rule base is adaptable to the document domain, e.g., business letters, technical journals, etc. For each domain, an appropriate rule base preferably is created and tuned to the domain, either offline or during runtime.".*). [Examiner's Remarks: Note that the document structure analysis routine (rule-based application) utilizes a rule base which is editable during runtime of the document structure analysis routine.]

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Burns into the teaching of Broman to modify Broman's invention to include editing said customizable element during runtime processing of said ruleset in an environment in which the rule-based application executes. The modification would be obvious because one of ordinary skill in the art would be motivated to allow a user to perform customization of business rules without having to shut down the business process application which executes the business rules.

As per **Claim 36**, the rejection of **Claim 1** is incorporated; however, Bromman and Grindrod do not disclose:

- carrying information about said customizable element along with run-time instantiations of ruleset objects.

Burns discloses:

- carrying information about a customizable element along with run-time instantiations of ruleset objects (*see Column 2: 37-43, "In order to recognize structures that are unique to the document, the document structure analysis routine utilizes a rule base that is adapted to the particular application domain to analyze structures in the document. The rule base comprises a plurality of rules for testing structures in the document in order to recognize unique, or application-domain-dependent, structures."; Column 6: 31-37, "Furthermore, the rule base preferably is exchangeable and editable during runtime of the system 1 to ensure that the rule base is adaptable to the document domain, e.g., business letters, technical journals, etc. For each domain, an appropriate rule base preferably is created and tuned to the domain, either offline or during runtime."; Column 7: 33-36, "As shown in FIG. 5, the rule base of the present invention preferably is divided into several parts, namely, a file attribute 51, a rule unit 52 and a rule logic 53, which preferably occur in this sequential order. ").*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Burns into the teaching of Bromman to Bromman's invention to include carrying information about said customizable element along with run-time instantiations of ruleset objects. The modification would be obvious because one of

ordinary skill in the art would be motivated to allow a user to perform customization of business rules without having to shut down the business process application which executes the business rules.

8. **Claims 33-35** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Broman** in view of **Grindrod** and **Burns** as applied to Claim 1 above, and further in view of US 6,590,589 (hereinafter “**Sluiman**”).

As per **Claim 33**, the rejection of **Claim 1** is incorporated; however, **Broman**, **Grindrod**, and **Burns** do not disclose:

- setting a constraint on valid values for the customizable element.

Sluiman discloses:

- setting a constraint on valid values for a customizable element (*see Column 7: 21-25, “Macro list generator 16 also provides that the data to be accepted be constrained in a user-selectable manner. In the example of FIG. 3, the constraint is selected to be "NoSpace", requiring the user to enter names which do not contain the space character.”*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Sluiman into the teaching of Broman to Broman’s invention to include setting a constraint on valid values for the customizable element. The modification would be obvious because one of ordinary skill in the art would be motivated to accept data provided by a user that conforms to a specific set of requirements.

As per **Claim 34**, the rejection of **Claim 33** is incorporated; however, Broman, Burns, and Sluiman do not disclose:

- wherein the valid values comprise a discrete list of one or more valid values.

Grindrod discloses:

- wherein valid values comprise a discrete list of one or more valid values (*see Column 8: 35-43, "The two expressions 240, 242 may be created by the administrator using an expression builder as will be described in more detail below. Examples of comparison operators 236 include equal to, not equal to, less than, less than or equal to, greater than, greater than or equal to, contains, does not contain, and none. Examples of logical operators 238 include and, or, exclusive or, and none. Any other suitable comparison operators and/or logical operators may be utilized."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to include wherein the valid values comprise a discrete list of one or more valid values. The modification would be obvious because one of ordinary skill in the art would be motivated to limit the choices a user can make to a list of predefined valid values when making a customization change.

As per **Claim 35**, the rejection of **Claim 33** is incorporated; however, Broman, Burns, and Sluiman do not disclose:

- wherein the valid values comprise a range of values.

Grindrod discloses:

- wherein valid values comprise a range of values (*see Column 8: 35-43, "The two expressions 240, 242 may be created by the administrator using an expression builder as will be described in more detail below. Examples of comparison operators 236 include equal to, not equal to, less than, less than or equal to, greater than, greater than or equal to, contains, does not contain, and none. Examples of logical operators 238 include and, or, exclusive or, and none. Any other suitable comparison operators and/or logical operators may be utilized."*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Grindrod into the teaching of Broman to Broman's invention to include wherein the valid values comprise a range of values. The modification would be obvious because one of ordinary skill in the art would be motivated to limit the choices a user can make to a range of predefined valid values when making a customization change.

#### ***Response to Arguments***

9. Applicant's arguments with respect to Claims 1 and 32 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Q. C./

Examiner, Art Unit 2191

/Anna Deng/

Primary Examiner, Art Unit 2191